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## CHEMICALS:

### Citing increase in known neurotoxins, scientists call for tighter regs

Sam Pearson, E&E reporter

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Scientists have identified six additional chemicals since 2006 that can harm the nervous system, illustrating the need for regulations that would require more proof that a compound is safe before it can enter the marketplace, two top environmental health researchers said in a new paper.

The researchers also called for creating a new international scientific body akin to the International Agency for Research on Cancer, part of the World Health Organization, which would gather the world's top scientists on a regular basis to issue findings on chemicals believed to harm the nervous system.

The findings, published Saturday in the journal *The Lancet Neurology*, show that "there are almost certainly other chemicals out in wide use that are neurotoxic that have simply never been properly tested," said Philip Landrigan, an epidemiologist and pediatrician at New York's Mount Sinai Medical Center, who co-authored the review. "We think that the gap in chemical safety testing is really a big deal, that it's a serious threat to public health and it's something that needs to be fixed."

Landrigan and Dr. Philippe Grandjean of Harvard University's School of Public Health flagged manganese, fluoride, chlorpyrifos, DDT, tetrachloroethylene and polybrominated diphenyl ethers as chemicals that have been found since 2006 to cause neurological damage. The findings augment a key 2006 review the researchers conducted finding that six chemicals -- lead, methylmercury, polychlorinated biphenyls (PCBs), arsenic and toluene -- are harmful to brain development.

Industry groups were quick to dispute their research, which was funded by the National Institute of Environmental Health Sciences, part of the National Institutes of Health.

Landrigan and Grandjean "focus largely on chemicals and heavy metals that are well understood to be inappropriate for children's exposure, are highly regulated and/or are restricted or being phased out," the American Chemistry Council said in a statement. "They then extrapolate that similar conclusions should be applied to chemicals that are more widely used in consumer products without evidence to support their claims."

Landrigan, who was one of the first researchers to show lead could cause brain damage in children in the 1970s, also argued in the paper that the United States should adopt a new preventive regulatory regime for chemicals akin to the system used in the European Union. He said he considered naming two additional chemicals as neurotoxins -- phthalates and bisphenol-A, or BPA -- but ultimately did not in order "to err on the side of caution."

Testing requirements have been included in proposed reforms to the Toxic Substances Control Act, the 1976 law that regulates chemical safety in the United States (*E&E Daily*, Feb. 5). Landrigan said that although the paper's policy proposals are far-reaching, they would be feasible to implement.

"The fundamental issue is not technical," Landrigan said. "The issue is one of political will."